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Dated 1825

An account
of the
Epidemic
of
Lancaster County
Pennsylvania.
by
Carpenter Frazer
of
Pennsylvania.

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An account of the epidemic bilious fever, which prevailed in Lancaster county, Pennsylvania, during the autumns of the years 1820, '21, '22, '23. –

The Summers and Autumns of the first three years, during which this disease prevailed, (those of 1820, '21, '22,) were remarkably arid, dry & sultry. Indeed, three such dry seasons as these were not experienced since the first settling of the country. The year '23 was, however, an exception to the others; instead of being like them very dry, it was a remarkably moist season: the months of July and August were refreshed by enlivening showers; and the country, during the summer of this year, presented a great contrast to those of the three preceding years; in the latter the fields were extremely dry & parched, & no traces of vegetation could be seen; but in the former they were verdant, & vegetation flourished luxuriantly. –

Having premised these remarks on the general state of the weather, during the prevalence of this disease: we shall proceed to the consideration of its remote and exciting causes.

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Of the remote cause.- In the process of the decomposition of all organized bodies, whether animal or vegetable, there is produced by the play of chemical affinities, a peculiar volatile substance, which is held suspended in the atmosphere, and to which is attributed by nearly all the physicians of the present day the property of producing intermittent and remittent fevers. This substance, generated in great quantities, & in a highly concentrated & virulent state, we consider as the remote cause of the disease, which we are to describe in the succeeding pages. It is called miasmata; and it is supposed, that low, moist & marshy grounds, in very warm, sultry & wet seasons, generate it in the greatest quantity and in the most ~~virulent~~ active state. This is proved by the fact, that the inhabitants of low and marshy countries are very subject to the attacks of intermittents and remittents; whilst those, who reside in dry & elevated regions, are entirely free from them, except when there is such a peculiar combination of circumstances, as we shall mention shortly.- This miasma arises from the exposed beds of streams, stagnant water and fresh ploughed

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earth, as well as from the marshy and oozy soils, of which we have spoken.- We also consider, that this effluvium may be generated in dry & elevated situations, when the season is rainy, warm & sultry, and when there are large quantities of decaying vegetable and animal matter lying exposed in them; as is proven by the fact, that the Lancaster county epidemic did prevail in the summer and autumn of '23 in situations, placed under circumstances similar to those mentioned above.

Medical men generally believe, that this miasma is not produced in a state, sufficiently active to prove injurious to the animal frame, unless its production is favoured by moisture, in conjunction with a hot and close atmosphere; that, this state of the weather is conducive to the putrefaction of organic matter, and therefore to the formation of this effluvium, is doubted by no one. But it is a fact well known both to the physicians of Lancaster County and those of the Southern section of the Union, that in warm, dry & close Summers, when the streams are low and their beds exposed to the action of the Sun, this effluvium is generated in immense quantities, and in a condition

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much more virulent and concentrated, than when the season is such, as is generally supposed peculiarly favourable to it. The well known circumstances, that in the Southern States, when the Summers & Autumns are very warm & dry, the autumnal fevers are of a highly malignant character; and that in the hot and unusually dry Summers of 1820, "21, "22, the epidemic assumed a much more severe character, than it did in the following year; incontestably prove the above assertion.-

The action of this effluvium is not confined to the neighbourhood of the spot, in which it is formed; but it may be carried to a considerable distance by the wind, after being mixed with the atmosphere, and still retain the power of affecting the system. The precise distance from the place of its origin, at which it loses this power, is not exactly known: this much, however, we know; that the city of Rome, in the autumn during the prevalence of of the southerly winds, is very subject to intermittent and remittent fevers; which the inhabitants ascribe to the winds, blowing over the extensive Pontine marshes.

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When the disease first made its appearance, or during the two succeeding summers & autumns it prevailed along the banks of the streams and in the low grounds, and all the [illegible] [illegible] to being in [illegible]. The circumstance [illegible] along the [illegible] with the [illegible] streams [illegible] just [illegible] their beds [illegible] the [illegible] possible [illegible] pr- [illegible].— During the [illegible] summer & autumn of '93, when the streams were high and every thing presented an appearance [illegible] the contrary to that, which it did in the three preceding years it prevailed chiefly on the high grounds, [illegible] the low situations & shores of the creeks almost escaped its presence. The reason of this is obvious, namely that [illegible] the creeks & streams [illegible] the stream [illegible] well [illegible] was constantly [illegible], the matter contained [illegible] was [illegible] not [illegible] both [illegible] the [illegible], therefore, [illegible]

animal [illegible] vegetable, these [illegible] have [illegible] evolved. At the time of its appearance however where there was an immense quantity of vegetable matter exposed to the sun's rays, it was generated in great quantities so as to affect the persons inhabiting these.

In this disease generally, [illegible] [illegible] [illegible] neighbourhood of the [illegible] [illegible] [illegible] frequently prevails at the same time with it. At the [illegible] of [illegible] [illegible] [illegible] [illegible] some time [illegible] [illegible] [illegible] [illegible] [illegible] it seldom takes hold [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] impending dissolution.

In the commencement of the summer when the disease first made its appearance, it was generally put at the form of an intermittent or the [illegible] typhoid [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]

[illegible]

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We have thus attempted to write the history of it as it appeared to us at the time it first came under our consideration, when it put on the form of a continuous type. —

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[illegible]

[illegible]

[illegible]

[illegible] more malignant [illegible] afterwards [illegible]

[illegible]

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[illegible]

[illegible]

ed by a cathartic: after the stomach and bowels were evacuated, the cinchona was given in large doses during the intermission; this commonly accomplished the cure of the patient in a few days. Some cases, however, were very obstinate, & withstood all the powers of the bark: in such the liquor arsenicalis was usually employed successfully. A large dose of opium, exhibited in the commencement of the cold stage, or immediately before it accession, greatly lessened the duration and violence of the paroxysm. - I saw the prussiate of iron used in a few cases as a substitute for the bark, the result of which was favourable.

The circumstance, that this disease would not bear any copious evacuation, distinguished it from the autumnal fevers of any of the preceding years. Venesection could not be carried to any extent, without giving rise to the most dangerous consequences, reducing the patient so low, that it required the free use of the most active stimulants to raise him: indeed, if a large amount of blood was detracted, he generally sunk down into a typhoid state,

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from which he seldom recovered. Even after the operation of the first cathartic a copious and powerful evacuation of the bowels was dangerous: in this case the gentle cathartics were the proper remedies.—

We have now completed the account of this epidemic, which we have delineated, as it appeared to ourselves and the physicians, with whom we are acquainted. —

Doctor Physick